

FOREST INSECT AND DISEASE MANAGEMENT UNIT
U.S. FOREST SERVICE
DORAVILLE, GEORGIA

REPORT OF AERIAL DETECTION SURVEY

LAND OWNERSHIP OR SURVEY AREA: Linville Gorge Wilderness Area (Pisgah National Forest), and surrounding National Forest, State and private lands

STATE: North Carolina

AREA WITHIN SURVEY BOUNDARY: 168,960 acres

DATE: March 16, 1979

PERCENT COVERAGE: 100%

AIRCRAFT: Cessna 182

CREW: W. A. Carothers, C. Tolley, J. Ghent

REPORT PREPARED BY: W. A. Carothers

SURVEY OBJECTIVES: (1) To delineate areas of white pine defoliation caused by the introduced pine sawfly, *Diprion similis* Hartig., near the Linville Gorge Wilderness area.

(2) To determine the practicality of using aerial surveys for detection of introduced pine sawfly damage.

SURVEY RESULTS

Areas of defoliated white pine were observed in and near Linville Gorge. Subjective categories of light, moderate, and heavy were assigned to the observed defoliation. Areas of heavy defoliation were observed near the towns of Crossnore and Linville Falls (refer to map).

Areas of heavy defoliation were recognized by thin yellow foliage in the crowns, bare branches and occasional dead tops. Several dead white pines were also observed in the survey area. Light defoliation (recorded from ground surveys) was undetectable from the air. Defoliation which appeared moderate to heavy from the ground was detectable from the air.

CONCLUSIONS

Areas of heavy defoliation are centered in and around the Linville Gorge Wilderness area. The aesthetics of this area are of great value. Thus, the consequences of the current introduced pine sawfly infestation

may be great and are currently being investigated. A biological evaluation^{1/} and a statement of the biology and potential impact of the biology and potential impact of the sawfly in the Southern Appalachians^{2/} are being prepared by FIDM (Asheville Field Office).

In addition to the potential for damage to the forest resources, this region of the country has many white pine Christmas tree plantations that could become infested. While forest trees may survive several years of defoliation, even one year of light defoliation will seriously devalue Christmas tree stock.

Continued evaluation of this insect is needed. Field surveillance by National Forest personnel and other land managers should continue. The Aerial Survey Team will conduct an intensive survey to further delineate areas of infestation during June 1979*. Further insect population monitoring will be conducted by Forest Insect and Disease Management, Forest Service Research and State cooperators.

1/ Asheville Report No. 79-1-9 Biological Evaluation of the Introduced Pine Sawfly Outbreak in the Linville Falls Area of the Blue Ridge Parkway, N.C. 1979.

2/ Report in progress--What is the Biology and Potential Impact of the Introduced Pine Sawfly in the Southern Appalachians.

* Aerial surveys can be used to delineate areas of moderate and heavy defoliation. If coupled with ground surveys, aerial detection surveys should be very beneficial in locating and mapping areas of defoliation caused by the introduced pine sawfly.

For any additional information, Contact

Forest Insect and Disease Management Unit, S&PF
USFS - Southeastern Area

Northgate Office Park, Room 2103
3620 Interstate 85, NE
Doraville, GA 30340
Tel: 404-221-4796

or

P.O. Box 5895
Asheville, NC 28802
Tel: 704-258-2850
Ext. 625